

Makarow, Irina (OCD)

From: doug caldwell [dougcaldwell@compuserve.com]
Sent: Friday, October 03, 2003 7:42 AM
To: Makarow, Irina (OCD)
Subject: BP Cogen DEIS: New Comment Deadline



BUSINESS.PDF (20
KB)

Control technology of the future

Re: Copy of: Copy of: scr is very dangerous by the way
 nitrosamine precursors and hydrogen cyanide in catalytic
 reactions, such as SCR
 Nitrosamine will give you cancer and hydrogen cyanide will kill you in 10
 seconds
 doug

Environmental Residuals

The primary environmental effect of the project will be a
 slight reduction of NO_x emissions and a slight increase
 in emissions of ammonia m-w I sulfur trioxide (SO₃) and
 ammonium bisulfate (NH₄HSO₄). A literature review
 revealed concerns about the potential for the production of trace
 quantities of nitrosamine precursors and
 hydrogen cyanide in catalytic reactions, such as SCR. However, an
 analysis conducted for this report indicates
 that for SCR applications on coal-fired power plants the potential
 for generating measurable quantities of these
 substances is extremely remote. The likelihood of these
 occurrences is discussed in Section 4.1. This is the text
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ENVIRONMENTAL INFORMATION VOLUME
 SOUTHERN COMPANY SERVICES
 SELECTIVE CATALYTIC REDUCTION
 PROJECT AT
 PLANT CRIST
 PENSACOLA, FLORIDA
 Prepared for:
 Southern Company Services
 800 Shades Creek Parkway
 Birmingham, Alabama 35209
 Prepared by:
 Radian Corporation
 8501 MO-Pat Boulevard
 Post Office Box 201088
 Austin, Texas 78720-1088
 31 August 1989

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The Business Journal of Milwaukee - July 7, 2003
<http://milwaukee.bizjournals.com/milwaukee/stories/2003/07/07/story1.html>



EXCLUSIVE REPORTS

Pollution control of the Future

Pete Millard

A promising air-pollution control technology from Canada could be incorporated by Wisconsin Energy Corp. into its Power the Future expansion program.

Adding more effective pollution-control technology to Wisconsin Energy's three proposed Power the Future coal plants could sway the statewide debate on whether coal is an acceptable power-plant fuel.

Executives at Wisconsin Energy, the Milwaukee-based parent company of We Energies, have reviewed the air-pollution control system. It promises to improve air quality from fossil fuel power plants by capturing 99 percent of the nitrogen and sulfur oxides and heavy metals, including mercury.

Current air-pollution technologies used in utility power plants capture between 40 percent and 60 percent of the pollutants.

Isca Management Ltd., Vancouver, British Columbia, is marketing its control technology to more than a dozen energy utilities in the United States and hopes to have a large-scale demonstration project underway before the end of 2003.

Wisconsin Energy executives believe the technology may work in the future, but aren't convinced the process is ready to be applied in a large-scale plant.

"It is a technology we're interested in but can't commit to until it's been commercially tested," said Kris McKinney, manager of environmental policy at We Energies.

So far, the technology has been successfully tested in the chemical engineering department laboratory at the University of British Columbia in Vancouver. Basic research for the Isca technology was completed at the university with funding from the National Research Council of Canada.

"If there is a technology out there that can capture virtually 100 percent of the mercury, sulfur dioxide and nitrogen oxides, it behooves We Energies to include it as part of its Power the Future project," said Marc Looze, a spokesman for Clean Wisconsin.

Clean Wisconsin is one of 30 organizations in a coalition called Reset Wisconsin that opposes the construction of new coal plants. Power the Future is We Energies' \$7 billion building project that includes adding three 600-megawatt coal plants in southeastern Wisconsin.

Mercury mitigation

A recent decision by the Wisconsin Natural Resources Board to further restrict mercury emissions may force state utilities to look more closely at Isca.

"We've got the answer to the mercury problem in your waters," said Doug Caldwell, president of Isca.

By January 2010, mercury emissions under the new DNR rule would be reduced by 40 percent and by 80 percent by January 2015. The action aims to limit mercury emissions into the atmosphere.

Less mercury entering the air means less of the pollutant will be deposited into Wisconsin's waters where it builds up in fish and wildlife. Atmospheric mercury deposits have contaminated all of the state's water bodies and have resulted in a statewide fish consumption advisory in effect since 2001 for people who eat sport fish.

Caldwell said Wisconsin Energy is reluctant to buy into his company's technology because the company is testing its own in-house technology to improve the removal rates of mercury from power plant emissions.

McKinney disagrees with Caldwell's assessment of why Wisconsin Energy has not offered to invest in Isca. McKinney said Wisconsin Energy does not have the resources like some larger utilities to spend on speculative technologies. Wisconsin Energy is working through Electric Power Research Institute, Palo Alto, Calif., to conduct its pollution-control tests.

The Wisconsin Energy \$6.8 million mercury project, done in collaboration with the U.S. Department of Energy's National Energy Technology Laboratory and EPRI, has been tested at the company's Pleasant Prairie Power Plant near Kenosha.

The Isca pollution-control technology injects chlorine gas into a power plant's flue-gas stream to oxidize harmful components, which are then easier to remove through conventional processes.

EPA review

The Isca process effectively removes sulfur dioxide, nitrogen oxides and mercury, according to an analysis by EPRI. The U.S. Environmental Protection Agency has reviewed the Isca technology and considers it one of several multi-pollutant control technologies under development that could gain widespread application.

One of the possible drawbacks of the Isca technology is storing large volumes of chlorine gas at power plant sites, said an EPA engineer. Possible leaks could pose a hazard to power plant employees and the public.

Isca estimates the total capital required to install this system is about \$160 per kilowatt hour. A 600-megawatt plant could be retrofitted with the Isca technology for about \$30 million, which is about one-third to one-half the cost of conventional pollution control devices, said Caldwell. A spokesman for the Electric Power Research Institute claims the installation cost might be optimistic given the number of process steps.

More than half a dozen utilities have offered financial support for a demonstration and full-scale designs have been completed by Research-Cottrell and Du Pont.

Isca is seeking an architectural and engineering firm, as well as a chemical firm, to fund and complete a 10-megawatt commercial demonstration.

"The problem we've encountered is there are not a lot of engineering design firms willing to take on projects and offer a warranty to utilities for the add-on equipment," said Caldwell.

Isca claims the technology could be ready within a year for full-scale application. All the equipment required for installation of the process is already available on an industrial scale, said Caldwell.

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